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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/806,320

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Yong-jin Ahn

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11/14/2006

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EXAMINER

CHOW, LIXI

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/806,320

Applicant(s)

AHN ET AL.

Examiner

Lixi Chow

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 10/256,244
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-29 are pending in this application.

#### *Continued Examination Under 37 CFR 1.114*

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/17/06 has been entered.

#### *Double Patenting*

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-29 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-24 of copending Application No.

11/430,169. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

The copending application claims include all of the limitations of the instant application claims, respectively. The copending application claims also include additional limitations. Hence, the instant application claims are generic to the species of invention covered by the respective copending application claims. As such, the instant application claims are anticipated by the copending application claims and are therefore not patentably distinct therefrom. (See *Eli Lilly and Co. v. Barr Laboratories Inc.*, 58 USPQ2D 1869, "a later genus claim limitation is anticipated by, and therefore not patentably distinct from, an earlier species claim", *In re Goodman*, 29 USPQ2d 2010, "Thus, the generic invention is 'anticipated' by the species of the patented invention" and the instant "application claims are generic to species of invention covered by the patent claim, and since without terminal disclaimer, extant species claims preclude issuance of generic application claims").

The subject matter claimed in claims 1 and 2 of instant application is not patentably distinct from the subject matter claimed in claim 1 of copending application 11/430,169, i.e., the limitation, "a recording waveform generating unit generating a recording waveform which includes: a first multi-pulse corresponding to the first level of the input data and alternating between a low first multi-pulse level and a high first multi-pulse level, a second multi-pulse preceding the first multi-pulse and corresponding to the second level of the input data, the second multi-pulse alternating between a low second multi-pulse level and a high second multi-pulse level" of the instant application corresponds to the limitation, "a record waveform generating unit generating a recording waveform which includes a first multi-pulse having a plurality of first

pulses corresponding to a first level of input data and a second multi-pulse having a plurality of second pulses corresponding to a second level of the input data” of the copending application. Also, the limitations, “a leading one of the pulses of the second multi-pulse set to the low second multi-pulse level, and a power level between an end of the second multi-pulse and a first one of the pulses of the first multi-pulse set to the high second multi-pulse level” of the instant application is similar to the limitation, “a leading one of the second pulses is set to a low level and a power level of a pulse between an end of the second multi-pulse and a first one of the first pulses of the first multi-pulse is set to a high level” of the copending application. Furthermore, claims 3-12 correspond to claims 2-9 of the copending application; claim 13 corresponds to claims 1 and 9 of the copending application; and claims 14-24 correspond to claims 10-19 of the copending application.

In addition, the subject matter claimed in claims 25-29 of the instant application is similar to the subject matter claimed in claims 20-24 of the copending application 11/430,169. For example, the arrangement of the leading one of the second pulses and the power level of the pulse between the end of the second multi-pulse and a first one of the first pulses of the first multi-pulse claimed in claims 25-29 of the instant application is the same as the arrangement of the leading one of the second pulses and the power level between the end of the second multi-pulse and a first one of the first pulses of the first multi-pulse claimed in claims 20-24 of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

*Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 13 is rejected under 35 U.S.C. 102(e) as being anticipated by Dekker (US 6,600,709).

Regarding claim 13:

Dekker discloses an apparatus for forming a first state (see Fig. 1A, reference #11) and a second state (see Fig. 1A, reference #12) alternatively and sequentially on an optical recording medium in response to input data having a first level and a second level less than the first level, respectively, in an optical recording apparatus, the apparatus comprising:

a recording waveform generating unit generating a recording waveform which includes:

a first multi-pulse (Fig. 1A, reference #13) corresponding to the first level of the input data and alternating between a low first multi-pulse level and a high first multi-pulse level,

a second multi-pulse (Fig. 1A, reference #14) following the first multi-pulse and corresponding to the second level of the input data, the second multi-pulse alternating between a low second multi-pulse level and a high second multi-pulse level,

the high second multi-pulse level is set between the low and high first multi-pulse levels (see Fig. 1A,  $P_e$  is the high second multi-pulse, which is between the low and high first multi-pulse levels), and

a power level between an end of the second multi-pulse and a first one of the pulses of the first multi-pulse is varied in accordance with a power level of a last one of the pulses of the second multi-pulse and a pulse duration of the power level between the end of the second multi-pulse and the first one of the pulses of the first multi-pulse (see Fig. 1A, the pulse connecting the erase pulses 14 and another write pulses 13).

7. Claim 29 is rejected under 35 U.S.C. 102(b) as being anticipated by Ohno et al. (US 5,150,31; hereafter Ohno).

Regarding claim 29:

Ohno discloses an apparatus (see Fig. 6) for forming a first state and a second state alternatively and sequentially on an optical recording medium in response to input data having a first level and a second level (see Fig. 4(a)), respectively, in an optical recording apparatus, the apparatus comprising:

a recording waveform generating unit (Fig. 6, element 8) generating a recording waveform which includes:

a first multi-pulse corresponding to the first level of the input data and having a plurality of first pulses alternating between a low first multi-pulse power level and a high first multi-pulse power level (see Fig. 4(b); the first multi-pulse corresponds to the multi-pulse when the input signal is high)

a second multi-pulse preceding the first multi-pulse and corresponding to the second level of the input data, the second multi-pulse having a plurality of second pulses alternating between a low second multi-pulse and a high second multi-pulse power level (see Fig. 4(b); the second multi-pulse corresponds to the multi-pulse when the input signal is low),

the high first multi-pulse power level is set as greater than the high second multi-pulse power level (power  $P_p$  is greater than  $P_b$ ), and

a leading one of the second pulses is set to a low second multi-pulse power level and a power level between an end of the second multi-pulse and a first one of the first pulses of the first multi-pulse is set to the low second multi-pulse power level (see Fig. 4(b); the leading pulse of the second pulses and the power level between an end of the second multi-pulse and a first one of the first pulses are both set to be  $P_r$ , which is the low second multi-pulse).

#### ***Response to Arguments***

8. Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

9. No comment will be made in this Office Action regarding the allowability of claims 1-12 and 14-28 due to the Double Patenting rejection.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lixi Chow whose telephone number is 571-272-7571. The examiner can normally be reached on Mon-Fri, 8:30am to 6:00pm.

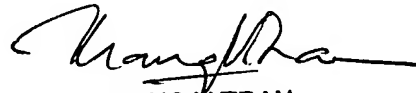
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, A. L. Wellington can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2627

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LC 11/7/06



THANG V. TRAN  
PRIMARY EXAMINER